DEFINITION OF DESIGN
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How we define design forms the basis of both our theoretical and pragmatic expressions as designers. Without a clear understanding of what we mean by "design" we are apt to find ourselves the victims of arbitrary thoughts and styles, unconsciously mimicking the misrepresentations of aesthetics, form, and function advocated by others.

DEFINITION

The word "design" is commonly used as either a noun or a verb. As a noun, "design" generally refers to some object or other entity. As a verb it is usually used to refer to a process, or series of activities. For the purpose of this definition the word "design" will be used solely as a verb, thus drawing attention to the fact that design is a process.

Simply put ...

"Design is the thought process comprising the creation of an entity."

This concise, seemingly sterile, and yet deceptively simple definition of design, is built on a solid foundation of ideas and concepts that will serve as the very root of our philosophy of design. To dismiss this clear, simple definition as being overly generic, obscure, or even obvious, is to miss its value to us in our everyday world as designers.

THOUGHT

"Design is the thought ..."

It is "first thought," or that type of thought we call insight. It is the mental synapse that instantly sees the potential connection between problem and possibility; that sees the capacity for order in the midst of chaos, or for improvement amid inefficiency.

Design is also intuition, that form of subconscious thought that leads us to a deeper sense of knowing, often in the apparent absence of rational confirmation. Intuition is akin to an elongated insight that tells us we are on to something. It is the hunch that often underlies our efforts to perform rational analysis.

Design also involves reason, that fully conscious form of thought that assesses the problem and analyzes the possibilities for solution. It is the analytical process that relies on method and mathematics to assess, refine, and verify its various hypotheses.

And finally, design is the synthesis of all three of these aspects of thought (insight, intuition, and reason) that forms the complete, and verifiable, conceptualization of possibility. To assume that thoughtfulness in design is limited to one or two of these aspects is to stifle the power of our creative potential as designers. Those who argue that "design," or perhaps even "creativity," is limited solely to the intuitive, or to the rational, often do so based more on a limitation of their own skills or interests than on any well-founded epistemology.

Regardless of what talents we may have, or lack, what interests may motivate us, or where we find our own personal comfort and satisfaction as designers, design involves the utilization and synthesis of all three aspects of thought: insight, intuition, and reason.

PROCESS

"Design is the thought process ..."

As presented in this definition, design is the activity of creation, as opposed to the product of creation. It is a sequence, or set, of thought-filled events and procedures that lead to the creation of that which is being designed. This thought process also involves the various activities associated with thought (contemplating, speaking, writing, drawing, modeling, constructing, etc.) that are typically used to carry one's "image of possibility" from initial concept to completion.

In other words, design is not "product"; "product" is, rather, the output of design. That which has been created is not "a design," it is what it is (a house, an automobile, a computer, a health care program, a piece of music, etc.); it is an "entity" unto itself. Design is the process used to create that entity.

The nature of this process, which is often modeled as a linear sequence of events, is in reality a highly complex, multifaceted set of thought-filled activities. While design is linear, in the sense that it is sequenced in time as one moves from initial concept to a completed product, it is also nonlinear. Design thought often jumps in discontinuous association from one aspect of a problem to another as it searches for solution. It is multileveled, in the sense that overall systems, subsystems, and even minute details often need to be considered simultaneously.

Design thought is also iterative. Prototypical forms need to constructed, assessed, and then reformulated to develop the understanding necessary for the next higher level of solution.

As one can see, this process called "design" can be discussed and described in many ways. This is not to say that a specific description of design (linear, iterative, etc.) given at a particular point in time can not be helpful, for it can and is often necessary for the effective development and management of the overall design process. What is important is the fact that the total thought process of design involves a wide variety of procedural structures and thus can not be restricted to a particular methodology.

COMPRISING

"Design is the thought process comprising ..."

That is, it includes, or contains, every thought and action required to create that which is being designed. The whole of design comprises all the individual parts of that thought process leading up to, involved with, and even following the creation of the entity being designed.

Depending on the type of entity being designed, this process can include the following:

- the identification of a set of needs,
- the initial conceptualization of a way to meet those needs,
- the further development of that initial concept,
- the engineering and analysis required to make sure it works,
- the prototyping of its preliminary form,
- the construction of its final form,
- the implementation of various quality control procedures,
- selling its value to the consumer,
- its delivery to the consumer,
- providing for after-service,
- and obtaining feedback regarding its utility and value.

Each of these steps contributes to the generation of form and is thus part of the design process.

Frequently, designers -- those responsible for the creation of an entity -- limit their definition of design to the early phases of this overall process and thus abdicate their responsibility, as designers, to others. In doing so they relinquish control to others who are often less committed to their "image of possibility" or their "sense of continuity" concerning the final product and how it relates to the user. This abdication is one of the primary causes of inferior products.

Quality design (the process) and quality products (the output of that process) require a comprehensive definition of design that comprises the whole "thought/activity" design process and not some limited, however well-intended, subset of that process.

CREATION

"Design is the thought process comprising the creation ..."

This comprehensive "thought/action" process is directed toward, and culminates in, creation. That is, it leads to the tangible realization of a mature completion of the "image of possibility" that originally served to initiate the process.

Without this realization the original "image of possibility" becomes an unfulfilled dream, or a frustration, and in time can vanish altogether. This is not to say that the original image does not change during the design process, for it does and often quite drastically.

What is important is that this change is a natural part of the maturation process and that the successful completion of this process, which often begins as a mere figment of our imagination, culminates as sensible reality in time and space.

The creation of this reality serves as the pivotal point in the overall design process; for without creation the process is either incomplete, or fallacious. It is incomplete when the process stops prior to creation, fallacious when creation is replaced by one of its impostors.

All too often the act of creation is replaced by either copying, or mimicking, the results of some previous design process, which itself may have been fallacious. While the results of similar processes may themselves be similar, they are never the same, and should never be taken for granted. Each design process must include its own act of creation.

ENTITY

"Design is the thought process comprising the creation of an entity."

An entity, that is, the product of the design process, can be

- physical, such as an object that occupies space (e.g., the house we live in, a car, or a piece of art),
- temporal, such as an event that occurs in time (e.g., a musical concert, a political rally, or a birthday party),
- conceptual, such as an idea (e.g., the theory of relativity, the concept of cybernetics, or even the definition of design), or
- relational, such as a relationship that describes, or specifies, the interaction between entities (e.g., the procedures for operating a computer, or even the friendship between two people).

Each of these entities can be designed.

The design process is not limited, as so many of us have been lead to believe, to that narrow class of objects or events that are supposed to have some sort of special "aesthetic" appeal.

Any entity can be designed, that is, can be created with intent and purpose. The total thought process encompassing the creation of that entity, the process that gives it its form, be it physical, temporal, conceptual, or relational is design.

CONCLUSION

While the contents of the preceding paragraphs elaborate the intent of our definition, it is the definition itself that provides the clarification of its meaning. This simple definition ...

"Design is the thought process comprising the creation of an entity."

... summarizes the essence of design. More importantly, however, it provides the foundation for a substantial extrapolation of this essence that can, through our efforts as designers, lead to more purposeful designs.

This paper is not meant to be conclusive, but rather catalytic. Its purpose is to initiate a broader conversation about the definition of design and its importance to all fields of design.